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REPORT
101-526

POLLUTION PREVENTION ACT OF 1990

OCTOBER 12 (legislative day, OCTOBER 2), 1990.—Ordered to be printed

Mr. BURDICK, from the Committee on Environment and Public Works, submitted the following

REPORT

[To accompany S. 585]

The Committee on Environment and Public Works, to which was referred the bill (S. 585) to implement the national objective of pollution prevention by establishing a source reduction program at the Environmental Protection Agency, by assisting States in providing information and technical assistance regarding source reduction, and for other purposes, having considered the same, reports favorably thereon with amendments and recommends that the bill as amended do pass.

PURPOSE AND SUMMARY

The purpose of the bill is to make it the national policy of the United States to reduce or eliminate the generation of waste at the source whenever feasible and to direct the U.S. Environmental Protection Agency to undertake a multi-media program of information collection, technology transfer, and financial assistance to the States to implement this policy and to promote the use of source reduction techniques.

The bill is designed as a first step toward accomplishing pollution prevention objectives. This bill will encourage the voluntary reduction of hazardous wastes and other pollutants created during the manufacturing process by improving the quality of information available to industry, State and local and Federal officials, and by establishing an office of EPA to collect and analyze data about source reduction, and to administer a new probram of grants to states for technical assistance to businesses seeking information on source reduction. The Committee recognizes that additional steps may be necessary to undertake a comprehensive pollution preven-

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tion program. The Committee intends to revisit this matter in the context of the reauthorization of the Resource Conservation and Recovery Act during the 102d Congress.

To this end, the bill requires the EPA to conduct the following activities:

—to develop and implement a strategy to promote activites at EPA which prevent the generation, emission or discharge of hazardous wastes and other pollutants at their sources;

—to make matching grants to States for technical assistance to businesses seeking to prevent the export of pollution;

—to establish a national clearinghouse on source reduction techniques, which will serve as a center for source reduction technology transfer;

—to coordinate and improve the collection of information with respect to source reduction, recycling and treatment practices under the Resource Conservation and Recovery Act and Section 313 of the Superfund Amendments and Reauthorization Act;

—to establish and maintain a national data base containing information on source reduction practices and opportunities for specific industries;

—to report to Congress on progress towards achieving industrial source reduction, on regulations that may inhibit source reduction, and on pollutants and industries that requires priority assistance on source reduction strategies and techniques; and

—to establish an Office of Pollution Prevention to carry out the functions listed above, and to review for the Administrator the impact proposed environmental regulations would have on source reduction. This review of regulations should be accomplished in an expeditious manner. The Committee expects that it will not be used to delay the proposal or promulgation of agency rulemaking.

The bill authorizes an appropriation of $8 million to the EPA in each of fiscal years 1991, 1992 and 1993 for the purpose of carrying out the functions specified in the Act. The bill also authorizes $8 million in each of fiscal years 1991, 1992 and 1993 for state grants authorized in the Act.

BACKGROUND AND NEED FOR THE LEGISLATION

Every year thousands of industrial plants emit millions of tons of toxic pollutants. In April 1990, EPA released initial figures from the 1988 Toxic Release Inventory showing that 4.57 billion pounds of toxic chemicals were released into the nation's air, water and land from 19,762 industrial plants that reported in 1988. The Office of Technology Assessment testifying before the Subcommittee on Superfund, Ocean and Water Pollution said that toxic substances account for "as many as 400 billion pounds, or 200 million tons * * *"

The potential hazards posed by this toxic waste and the direct and indirect damage which has been caused by its mishandling in the past have prompted extensive government and industry attempts at waste management. Congress has responded by passing increasingly stringent pollution control laws since 1970. At the

same time, many industrial generators have voluntarily sought ways to improve their waste management practices—through reduction at the source, recycling, treatment and disposal. For the most part, efforts have focused on treatment, disposal and recycling, and to a much lesser extent on source reduction.

There is growing evidence that significant economic and environmental benefits can be realized by reducing industrial waste at the source rather than managing such waste after it is produced. In the Office of Technology Assessment's 1986 Report to Congress entitled "Serious Reductions of Hazardous Wastes" OTA concluded that "hazardous waste reductions of 10 percent a year are achievable for the next five years."

Numerous methods for reducing waste at the source have been applied including, manufacturing changes, equipment changes, product reformulations and substitutions, and improved housekeeping. The OTA in its 1986 report, "Serious Reduction of Hazardous Waste" identified five broad approaches to waste reduction:

(1) In-process recycling: This approach uses methods to return wastes or their components for reuse within existing operations.

(2) Process technology and equipment: This approach requires changes in the basic production technology and equipment including modifications or modernization to reduce or eliminate waste generation.

(3) Plant operations: This approach requires better plant management or housekeeping such as predictive and preventive maintenance, better materials handling, changes in cleaning methods, separation of materials to facilitate in recycling.

(4) Process inputs: This approach requires changes in raw materials, such as using water instead of organic solvents or using materials with lower levels of contaminants.

(5) End products: This approach requires changing the design, composition or specifications of end products.

Many companies have applied some of these methods with positive results. Hundreds of thousands of tons of pollutants have been eliminated by companies with source reduction programs, saving such companies millions of dollars in pollution control costs.

There are numerous examples of successful in-process recycling. A large chemical manufacturer was able to eliminate hydrochloric acid by installing a $16 million conversion unit to change anhydrous hydrogen cloride into chlorine, which is recycled back into the process and hydrogen which is used as a fuel in the plant. Printing companies have been able to recover up to 87 percent of the organic solvents in their inks. Another company utilizing a process change, replaced a chemical process to clean flexible metal electronic circuits with a strictly mechanical process. Yet another company utilized a process input change where 1-1-1 trichloroethane, a solvent was replaced with a water soluble cleaner for degreasing applications.

Although there are numerous success stories, many companies, do not have source reduction programs, due to a lack of awareness or a lack of information about existing techniques and practices. In EPA's 1986 report to Congress entitled "Minimization of Hazardous Wastes", the Agency cited an array of disincentives to source reduction. Aside from technical feasibility, awareness by upper-level

management was one of the most influential factors in determining whether introducing source reduction programs are initiated by industry. Additionally, the Office of Technology Assessment in its 1987 report entitled 'From Pollution to Prevention" stated that:

> Today waste reduction proceeds slowly—not because of a lack of technology—but because it is inhibited by human, organizational, and institutional obstacles in industry and government. Industry's attention and resources go chiefly to regulatory compliance. As the government presses companies to fix the mistakes of the past, it provides little help to prevent problems for the future. Companies having the worst competitiveness problems are the least likely to be able to examine and implement waste reduction, even though they need it the most. Potential economic benefits are not being understood or captured systematically in industry.

S. 585 seeks to provide information, technical and financial assistance to promote source reduction opportunities and implement source reduction activities.

EPA Pollution prevention programs

EPA in its October 1986 Report on the Minimization of Hazardous Wastes concluded that the Agency should establish a waste minimization program to develop information, to provide technical and information assistance to waste generators and States, and to consider long term options with respect to achieving waste minimization. Since issuing the report, the EPA has created a pollution prevention office located in the Office of Policy, Planning and Evaluation and has published a proposed pollution prevention policy in the Federal Register on January 25, 1989.

In addition, under section 313 of the Emergency Planning and Community Right to Know Act of 1986, EPA began obtaining data on the release of certain toxic substances into the environment. Industries that manufacture, process, or use certain toxic chemicals above the specified threshold amounts are required to report all releases of such chemicals into the air, water, and land. In these section 313 reports, EPA has provided for optional reporting of any source reduction and recycling efforts undertaken by industry with respect to such toxic chemical releases.

However, in testimony before the Subcommittee on Superfund, Ocean and Water Protection, the Office of Technology Assessment was critical of EPA's current efforts on pollution prevention. OTA said:

> * * * the nation's pollution prevention efforts are scattered and uncoordinated, lack permanent institutional support, lack strong funding, and for the most part, pale in comparison to the established pollution control culture. More specifically: EPA's efforts remain several levels below the Administrator in the organization and are underfunded * * * EPA has not made much progress in using its current information collection systems to measure national waste reduction.

The Committee understands that the Environmental Protection Agency has not yet published the pollution prevention policy it proposed on January 25, 1990. The Committee urges EPA to complete action on this policy in a timely manner and to establish integrated source reduction programs with EPA's program offices.

The Committee wishes to emphasize that pollution prevention should be considered a high agency priority and should obtain the level of resources necessary to implement an effective source reduction policy and program.

State pollution prevention programs

A number of States have already instituted pollution prevention programs. Most of these State programs are designed to provide on-site technical assistance to industry in applying source reduction techniques. A few states also provide financial assistance to industries and information on the benefits of source reduction. Some states also include waste-end taxes, loan and grant programs, information exchanges, and tax bonuses as added incentives or disincentives to source reduction.

Of particular concern is that many programs deal primarily with waste management and efforts to reduce the amount of waste to be land disposed rather than in reducing the waste at the source. In some cases, these programs merely shift the pollution from the land to the air and water.

In many cases, State pollution prevention programs lack the funding and specific commitment to source reduction to achieve their full potential.

SECTION-BY-SECTION ANALYSIS

Section 1. Short title and table of contents

Section 1 provides the title "The Pollution Prevention Act of 1990".

Section 2. Findings and policy

Section 2 addresses the Congressional findings with respect to the generation of pollution, the opportunities to reduce pollution at the source, the benefits of reduction, and the reasons why prevention techniques are not adopted and the need for EPA to implement a pollution prevention program.

Section 2 also establishes the following pollution hierarchy as national policy; to reduce or eliminate pollution before it is created whenever feasible; to recycle pollutants which are generated in an environmentally safe manner, whenever feasible; to treat pollutants which cannot be prevented or recycled in an environmentally safe manner whenever feasible and to dispose of pollutants only as a last resort and in an environmentally safe manner.

Section 3. Definitions

Section 3 provides the definitions of the terms used in the bill: "Administrator," "agency," "toxic chemical," "release," "source reduction," and "multi-media."

For the purpose of this Act, the term source reduction means any practice, including equipment or technology modifications,

process or procedure modifications, reformulation or design of products, substitution of raw materials, and improvements in housekeeping, maintenance, training or inventory control, which reduces the amount of any hazardous substance, pollutant, or contaminant entering the waste stream or otherwise released into the environment, including fugitive emissions, prior to recycling, treatment or disposal. Source reduction does not include any practice which alters the physical, chemical or biological characteristics or volume of a hazardous substance, pollutant or contaminant through a process or activity which itself is not integral to and necessary for the production of a product or the providing of a service.

Section 4. EPA activities

Section 4 requires EPA to establish an office independent of the Agency's single-medium program offices but shall have authority to review and advise such offices on their activities to promote a multi media approach to source reduction. The Committee intends for this office to be established within the Agency in a manner to reflect the importance, and multi-media significance of the functions of the new office.

The Committee is concerned that pollution prevention has not received the instititional support and priority necessary to effectively promote source reduction. In order to emphasize the importance of pollution prevention, this section directs the EPA to undertake a number of functions including:

—establish standard methods of measuring source reduction;
—review EPA activities and regulations to consider their effect on source reduction;
—improve public access to data collected under Federal environmental statutes;
—coordinate source reduction activities in EPA offices and with appropriate offices to promote source reduction in other Federal agencies;
—facilitate adoption of source reduction techniques by businesses;
—identify measurable goals and establish milestones for EPA to follow to implement the policy of this Act;
—establish an advisory panel of technical experts to improve data collection and dissemination;
—establish a multi-media training program for permit writers and enforcement and inspection officials to identify source reduction opportunities;
—identify and make recommendations to eliminate barriers to source reduction and use the procurement process to encourage source reduction;
—identify opportunities to use Federal procurement to encourage source reduction;
—develop source reduction auditing procedures; and
—establish an annual award program for source reduction.

Section 5. Grants to States

Section 5 establishes a matching grant program to states for the purposes of promoting source reduction. This section requires EPA to make grants to states to provide technical assistance to business-

es, to provide training in source reduction and to undertake source reduction research. States would be required to provide 50 percent matching funds. The Committee intends this grant program to provide money for State initiatives but wishes to make it clear that state source reduction efforts should not become dependent on Federal financing.

Section 6. Source reduction clearinghouse

Section 6 requires EPA to establish a source reduction clearinghouse and to make the information in the clearinghouse publicly available. The purpose of the clearinghouse is to compile information supplied by States and from other sources on various source reduction methods, and to provide technology transfer, public outreach and eduction on source reduction.

Section 7. Source reduction and recycling data collection

Section 7 requires companies filing toxic chemical release forms under section 313 of the Superfund Amendments and Reauthorization Act of 1986 (SARA) to include toxic chemical source reduction, recycling and treatment information. The specific information shall be collected on a facility-by-facility basis for each toxic chemical and shall include (1) the quantity of the chemical entering the waste stream or otherwise released into the environment prior to recycling, treatment or disposal each year, and the percentage change from the previous year; (2) the amount of the chemical that is recycled each year and the percentage change from the previous year; (3) the amount of the chemical that is treated each year and the percentage change from the previous year; (4) the source reduction practices used including equipment, technology, process or procedure modifications, reformulation or redesign of products, substitution of raw materials and improvement in management, training, inventory control, materials handling, or other general operational phases of industrial facilities; (5) the ratio of production in the reporting year to production in the previous year; (6) the techniques used to identify source reduction opportunities; and (7) the amount of any toxic chemical released into the environment which resulted from a catastrophic event, remedial action, or other one-time event not associated with production processes during the reporting year.

The information that will be provided under this section shall be made available to the public to the same extent as provided in Title III of SARA. The Committee recognizes the possibility that the information reporting required by this section may cause the disclosure of proprietary or confidential information. For that reason, information submitted under this section which could be protected from disclosure as trade secrets under Title III of SARA shall be fully protected from disclosure to the same extent as provided in title III of SARA.

In addition, the new reporting on source reduction practices that this section requires is intended to only identify the broadest of categories used for source reduction. The information will not be collected at a level of detail sufficient to pose trade secrecy problems or reveal the site-specific equipment, technology, process or procedure modifications, reformulation or redesign of products, substitu-

tion of raw materials or specific improvements in management, training, inventory control, materials handling, or other general operational changes used by the industrial facility to promote source reduction.

Additionally, the type of information this section requires is already being collected under voluntary pollution prevention questions in the toxic chemical release forms under section 313 of the Superfund Amendments and Reauthorization Act of 1986 (SARA).

Section 8. EPA report

Section 8 requires EPA to report to Congress 18 months after enactment and biennially thereafter on its source reduction activities. In the first report EPA shall include an assessment of the effectiveness of the clearinghouse and grant program established under this act and shall include an evaluation of data gaps and data duplication with respect to data collected under Federal environmental statutes.

For the second report, EPA shall also provide an analysis of the data collected on an industry-by-industry basis for not less than five SIC codes or other categories of facilities. EPA shall select those SIC codes or categories that generate the largest quantities of toxic chemical waste. The Committee expects EPA to review, first, those chemicals which pose the greatest threat to human health and the environment. The analysis shall include an evaluation of trends in source reduction by industry, firm size, production, and other useful means. The second report shall also assess the usefulness and validity of data collected under the Act, identify barriers to source reduction and opportunities to overcome those barriers, and an identification of industries for which there are significant barriers to source reduction.

For each subsequent report, EPA shall include an analysis of five new SIC codes or categories which were not covered in prior reports. EPA shall also at the discretion of the Administrator include the other information provided in prior reports. The Committee included this provision to minimize reporting duplication and to reduce the reporting burden on the agency.

Section 9. Savings provisions

Section 9 provides that nothing in the Act shall be construed to modify or affect any other law.

Section 10. Authorization

Section 10 provides an authorization of $8 million for each of fiscal years 1991, 1992 and 1993 for EPA to implement this Act, and an authorization for state grants of $8 million for each of fiscal years 1991, 1992 and 1993.

Section 11. Implementation

Section 11 authorizes EPA to issue regulations to carry out the Act.

HEARINGS

On May 10, 1989, the Subcommittee on Superfund, Ocean and Water Protection held a hearing on Right-to-Know Pollution Data and on ways to improve the nation's pollution prevention efforts. Testimony received at the hearing addressed S. 585. On June 21, 1990, the Subcommittee on Environmental Protection held a hearing on the Waste Minimization and Control Act and the Municipal Solid Waste Source Reduction and Recycling Act of 1989, both of which contain provisions similar to S. 585. In the 100th Congress the Subcommittee considered similar legislation.

ROLLCALL VOTES

Section 7(b) of rule XXVI of the Standing Rules of the Senate and the Rules of the Committee on Environment and Public Works require that any rollcall vote taken during consideration of the reported bill be announced in the report.

On October 4, 1990, the Environment and Public Works Committee met in open session and ordered reported the bill S. 585, as amended, by voice vote, a quorum being present. No rollcall votes were taken during consideration of the bill.

COST OF LEGISLATION

In compliance with Section 403 of the Congressional Budget and Impoundment Control Act the Director of the Congressional Budget Office furnished the following report to the Committee on Environment and Public Works:

U.S. CONGRESS,
CONGRESSIONAL BUDGET OFFICE,
Washington, DC, October 9, 1990.

Hon. QUENTIN N. BURDICK,
Chairman, Committee on Environment and Public Works, U.S. Senate, Washington, DC.

DEAR MR. CHAIRMAN: The Congressional Budget Office has prepared the attached cost estimate for S. 585, the Pollution Prevention Act of 1990.

If you wish firther details on this estimate, we will be pleased to provide them.

Sincerely,

ROBERT D. REISCHAUER, *Director.*

CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

1. Bill number: S. 585.
2. Bill title: Pollution Prevention Act of 1990.
3. Bill status: As amended and ordered reported by the Senate Committee on Environment and Public Works on October 4, 1990.
4. Bill purpose: S. 585 would direct the Environmental Protection Agency (EPA) to establish an independent office within the agency with authority to advise other EPA offices on activities to promote source reduction (i.e., reduction in the generation of waste at the source). Also included in the bill would be mandates for EPA to: review proposed regulations to determine their effect on source re-

duction; facilitate the adiption of source reduction techniques by businesses; establish an advisory panel of technical experts; establish a Source Reduction Clearinghouse of information generated by states; and report to the Congress on actions taken to implement the bill.

S. 585 would authorize appropriations for EPA activities of $8 million per year for 1991 through 1993. In addition, the bill would authorize $8 million per year for 1991 through 1993 for grants to states to promote the use of source reduction techniques by businesses.

5. Estimated cost to the Federal Government:

[By fiscal year, in millions of dollars]

	1991	1992	1993	1994	1995
Authorization level	16	16	16		
Estimated outlays	14	16	16	2	

The costs of this bill fall within budget function 300.

Basis of estimate: For the purpose of this estimate, CBO assumes that S. 585 will be enacted early in fiscal year 1991, and that the full amounts authorized will be appropriated beginning in fiscal year 1991. Outlay estimates are based on historical spending patterns for similar activities.

6. Estimated cost to State and local governments: As stated above, S. 585 authorizes appropriations of $8 million per year for three years for grants to states. Federal funds would be limited to 50 percent of total program costs.

7. Estimate comparison: None.

8. Previous CBO estimate: On May 16, 1990, the Congressional Budget Office prepared a cost estimate for H.R. 1457, a similar bill ordered reported by the House Committee on Energy and Commerce. The House bill authorized appropriations of $18 million for each of the fiscal years 1991 through 1993, $2 million a year more than S. 585. The estimated costs reflect that difference.

9. Estimate prepared by: Kim Cawley.

10. Estimate approved by: C.G. Nuckols, for James L. Blum, Assistant Director for Budget Analysis.

REGULATORY IMPACT

Section 11(b) of rule XXVI of the Standing Rules of the Senate requires publication in the report of the committee's estimate of the regulatory impact made by the bill as reported. That estimate follows:

The bill imposes requirements that are already within the discretion of the Administrator of the Environmental Protection Agency.

CHANGES IN EXISTING LAW

Section 12 of the rule XXVI of the Standing Rules of the Senate requires publication of any changes in existing law by the reported bill. The bill makes no changes in existing law.

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